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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,698	01/08/2002	Norbert Taufenbach	6056-000040	9556
7590 03/26/2004				
Harness Dickey & Pierce P O Box 828 Bloomfield Hills, MI 48303		EXAMINER MENEFE, JAMES A		
		ART UNIT PAPER NUMBER 2828		

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/831,698	TAUFENBACH, NORBERT	
	<b>Examiner</b>	<b>Art Unit</b>	
	James A. Menefee	2828	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-48 and 50-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-48 and 50-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

In response to the amendment filed 12/19/2003, the specification and claims 30-34, 36-39, 42-43, 45, 48, 50-52 are amended, claims 53-55 added, and claim 49 cancelled. Claims 30-48 and 50-55 are pending.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30-33, 37-46, and 50-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Iehisa et al. (J. Appl. Phys., Jan. 1986, previously cited). See particularly Fig. 3b.

Regarding claims 30-33, Iehisa discloses a CO<sub>2</sub> slab laser having a gas filled chamber defined by a tubular housing with at least two electrodes that extend into the tubular housing, said electrodes overlapping one another to form a discharge chamber, and resonator mirrors provided within said housing. The mirrors (h),(i) are at the ends of the system, but are interpreted to be “within” the housing insofar as they are a part of the housing. The electrodes (e) are each supported at the opposite ends of the tubular housing on separate end pieces at the ends of the housing. The mirrors are supported in stationary relationship relative to the closest corresponding electrode, and as they are connected through other pieces may be interpreted as designed in one piece with the electrodes. The electrodes are adjustable relative to one another.

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Regarding claim 37, the electrodes are held in the housing by the end pieces that seal off the housing.

Regarding claims 38-39, the mirrors are in one piece with the end pieces.

Regarding claims 40-46, the housing is designed in at least two adjustable parts, the middle part and the adjustable parts on each side of the electrodes (e).

Regarding claim 50, the adjusting elements supported on the housing act on the electrodes.

Regarding claim 51, the housing and electrodes are cylindrical, with the electrodes having a smaller radius than the housing.

Regarding claim 52, the adjustment by the screw/bellows type adjuster will be in a fixed position after the electrodes are adjusted.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 34-36 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iehisa in view of Hochuli (previously cited US 3,719,900).

Iehisa discloses the limitations of the claims above, but does not explicitly teach the adjusting elements as claimed. Hochuli teaches that the cavity length may be adjusted using piezoelectric crystals and flexible bearings, such as a bellows. It would have been obvious to one

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skilled in the art to use these means of adjusting as they are known to be used for adjusting the cavity path length, thus adjusting the frequency, as taught by Hochuli.

Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iehisa in view of Yarborough et al. (previously cited US 5,140,606). Iehisa discloses the limitations of the claims as in the rejection of claims 30-32 above, but does not disclose the cooling means for cooling the electrodes. Yarborough teaches a CO<sub>2</sub> slab laser similar to that of Iehisa, having cooling means with flow starting at the ends of the electrodes as claimed (see par. bridging cols. 4-5, Fig. 3). It would have been obvious to one skilled in the art to utilize these cooling means as claimed because they provide improved cooling over the type shown in Iehisa, as taught by Yarborough.

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (571) 272-1944. The examiner can normally be reached on M-F 8:30-5.

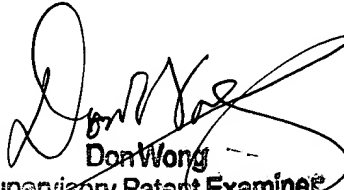
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (571) 272-1941. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JM  
March 15, 2004



Don Wong  
Supervisory Patent Examiner  
Technology Center 2800